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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/555,399	07/27/2000	AKIMITSU TSUKUDA	599-203P	2005

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BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

RESAN, STEVAN A

ART UNIT	PAPER NUMBER
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1773

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DATE MAILED: 07/30/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/555,399

Applicant(s)

TSUKUDA *et al*

Examiner

RESAW

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— The MAILING DATE of this communication appears on the cover sheet with the correspondence address —

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 5-6-02
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-5, 7 and 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are rejected for the reasons of record.

3. Claims 1-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tamaru et al in view of Tsukuda et al '938 and '220 for the reasons of record.

4. Applicant's arguments filed 5-6-02 have been fully considered but they are not persuasive.

With respect to the rejection under 35 U.S.C. 112 2nd paragraph:

Applicants argue that the examiners statement is erroneous in that MD and TD directions are determined automatically at the time of preparing the film irrespective of whether or not the film has been oriented or not and that this is well known among those persons skilled in the art.

However, the examiner strongly disagrees. The directional properties of a film are process dependent. A polymer film cast from a dilute solution in a square or round pan has randomly oriented chains and the film properties would be isotropic and not possess an MD or TD direction. The Poissons ratio in any planar direction would be equal i.e. ratio=1:1.

It is only when polymers are processed (e.g. melt extruded or cast from viscous solution) or post processed (e.g tenter oriented) that MD and TD directions are created. The very term MD stands for "machine direction" and implies operation by a machine to impart orientation.

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Furthermore, applicants specification and arguments are directed to a biaxial orientation process which is required to achieve the MD to TD ratio claimed. (i.e, differential orientation velocities).

With respect to the rejection under 35 U.S.C. 103 insofar as they apply to the present claims:

Applicants argue that Tomaru '989 teaches a polyethylene terephthalate having a Poissons ratio of 0.2 but fail to teach a polyamide film.

However, Tomaru '989 is suggestive for the use of an aromatic polyamide since the problems and shortcomings of both polyethylene naphthalate and aromatic polyamide films (column 1, line 52 "aramid") are solved by the invention of Tomaru et al.

Applicants also argue that Tomaru et al do not teach how to make a film nor how to measure the Poissons ratio and that the Poissons ratio is greatly affected not only by the material but the higher structure of the material.

However, processes for making of polyethylene naphthalate and aromatic polyamide films are well known to those skilled in the polymer arts. Likewise the measurement of the Poissons ratio is also well known in the art as evidenced by the 3 methods cited in applicants own specification. (See page 21, lines 15-24).

Applicants finally argue that the process used in the specification is critical to obtaining the Poisson's ratio claimed. However, the process of the specification does not produce the Poisson's

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ratio as claimed since the Poisson's ratio as claimed is $MD/TD < 0.4$ while the results of the specification appear to show $TD/MD < 0.4$ or a ratio of Poisson's ratios $TD/MD < 0.4$.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stevan Resan whose telephone number is 703-308-4287. The examiner can normally be reached on Tuesday to Friday from 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (703) 308-2367. The fax phone number for the organization where this application or proceeding is assigned is 703-305-5436.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Resan:mv

July 25, 2002


STEVAN A. RESAN
PRIMARY EXAMINER